

CLAIMS

1. A liquid-vapour distribution device for use in two-phase concurrent down-flow vessels, comprising:

5 a level, horizontal tray being perforated with holes, each perforation through the horizontal tray being fitted with a vapour lift tube,

the vapour lift tube consists of at least one elongated up-flow leg and one down-flow leg creating at least one up-flow zone and a down-flow zone between the up-flow zone and down-flow zone, the improvement of which comprises a bluff body being arranged within the transition zone and/or in a region of the up-flow or down-flow zone adjacent to the transition zone of the vapour lift tube.

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2.. The liquid-vapour distribution device of claim 1, wherein the bluff body is formed as a guide vane curving towards the legs of the vapour lift tube.

20 3. The liquid-vapour distribution device of claim 1, wherein the bluff body is formed as a fairing.

4. The liquid-vapour distribution device of claim 3, wherein one or more fairings are arranged on the down-flow leg adjacent to the transition zone of the tube.

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5. The liquid-vapour distribution device of claim 1, wherein the bluff body is formed as an impingement

AMENDED CLAIMS

[received by the International Bureau on 20 June 2005 (20.06.2005);
original claims 1-5 replaced by new claims 1-5 (1 page)]

1. A liquid-vapour distribution device for use in two-phase concurrent down-flow vessels, comprising: a level, horizontal tray being perforated with holes, each perforation through the horizontal tray being fitted with a vapour lift tube, the vapour lift tube consists of at least one elongated up-flow leg and one down-flow leg creating one or two up-flow zones, a down-flow zone and a transition zone between the up and down-flow zones, the one or two up-flow legs of the vapour lift tube are fitted along the down-flow leg so that each up-flow leg is non-concentric with respect to the down-flow leg, the improvement of which comprises a bluff body being arranged within the transition zone and/or in a region of the up-flow or down-flow zone adjacent to the transition zone of the vapour lift tube.
2. The liquid-vapour distribution device of claim 1, wherein the bluff body is formed as a guide vane curving towards the legs of the vapour lift tube.
3. The liquid-vapour distribution device of claim 1, wherein the bluff body is formed as a fairing.
4. The liquid-vapour distribution device of claim 3, wherein one or more fairings are arranged on the down-flow leg adjacent to the transition zone of the tube.
5. The liquid-vapour distribution device of claim 1, wherein the bluff body is formed as an impingement plate

Statement under article 19 (1)

Claims 1 and 5 are replaced by amended claims bearing the same numbers.

Claims 2 to 4 are unchanged.